Emergency Management and Response Information Sharing and Analysis Center (EMR-ISAC)

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NOTE: *This INFOGRAM will be distributed weekly to provide members of the Emergency Services Sector with information concerning the protection of their critical infrastructures. For further information, contact the Emergency Management and Response- Information Sharing and Analysis Center (EMR-ISAC) at (301) 447-1325 or by e-mail at emr-isac@dhs.gov.*

Wildfires versus Critical Infrastructures

The National Interagency Fire Center (NIFC) (PDF, 41.3 KB) and USA Today recently reported that parts of the desert Southwest, Alaska, northern Great Lakes, and the Gulf Coast are facing "above-normal chances of significant wildfires" during the 2010 fire season. A national fire weather program manager for the NIFC's predictive service said: "We're anticipating a hotter-and-drier-than-normal summer and anticipate a potentially active fire season in that area." The Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) ascertained that the increased fire risk for many areas of the United States was determined by an evaluation of several factors including fuels, weather, topography, climate, and drought data.

As residential areas expand into relatively untouched wildlands, people living in these communities are increasingly threatened by wildfires. Protecting critical infrastructures in the wildland from fire poses special problems. It will frequently stretch firefighting resources to the limit; therefore, making it difficult if not impossible to respond to another major incident. Additionally, fire and Emergency Medical Services stations located nearby to serve these residential areas may also be at risk.

Wildland fires leave large amounts of scorched and barren land. If heavy rains follow a fire, other natural disasters can occur such as landslides, mudflows, and floods. Once ground cover has been burned away, little is left to hold soil in place on steep slopes and hillsides. The potential for nature attacks following wildfires is another matter for serious consideration when community leaders and their Emergency Services Sector chief officers decide where to permanently locate personnel, physical assets, and communication/cyber systems (i.e., critical infrastructures).

If not already arranged, communities susceptible to wildfires and the possible natural disasters that may follow should contemplate negotiating mutual aid agreements with neighboring jurisdictions to bolster their protection and response capabilities. These agreements multiply the resources needed to protect critical infrastructures.

The EMR-ISAC recommends the National Wildfire Coordinating Group as another source of excellent information regarding the realities of the wildland-urban interface.

Solar Storms: Increasing Threat

An official at the Space Weather Prediction Center (SWPC) explained at a recent tabletop exercise that solar storms happen when explosions on the sun's surface send radiation or electrically charged particles toward Earth. "It's important to understand that, along with other types of natural hazards, solar storms can cause impacts," said Craig Fugate, Administrator of the Federal Emergency Management Agency (FEMA) when attending the exercise.

This information prompted the Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) to revisit this topic for current available data regarding the threat from solar storms to the critical infrastructures and operations of Emergency Services Sector (ESS) departments and agencies. Although SWPC forecasters predict low solar activity in the next four weeks, there is growing concern by the National Academy of Sciences about a slow activity increase to a "solar maximum," perhaps resulting in the "perfect storm" on a spring or autumn night in 2012.

The EMR-ISAC acknowledges the complex dependencies and interdependencies among national, state, and local critical infrastructures. Therefore, because of significant reliance on technology, critical sectors such as the ESS are vulnerable to operational degradation caused by a major solar storm. The "perfect storm" would have catastrophic and long-lasting socioeconomic outcomes that jeopardize a nation's survival, particularly for those in the northern latitudes. However, a major solar storm will significantly disrupt power, water, fuel acquisition, air conditioning, and communications including GPS receivers, and require recovery times maybe in excess of 4 years.

Considering the possibility of a major solar storm in mid-2012, scientists at the National Academy recommend infrastructure stakeholders (e.g. ESS) develop plans and implement actions to reduce susceptibility to the extremes of space weather and ensure the operational continuity of their respective physical assets, communications, and cyber systems.

More information about solar storms can be seen at "2012 May Bring the Perfect Storm," and also at "Solar Flare Activity Might Threaten GPS." If interested, view the two-minute CNN video about potential solar storms.

Electric Vehicles Update

By the end of this year, several fully modern, highway-capable electric vehicles (EVs) will be on sale throughout the United States. But will emergency responders be trained to perform their duties at serious traffic accidents involving EVs? The Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) reexamined this issue to verify that there are distinct differences between electric and gas-powered cars, which must be considered when providing crash assistance. See the article: "Facing a Wrecked Electric Vehicle, What Must EMS Staff Know"?

From this article, the EMR-ISAC learned that first responders must be trained to locate the best places to cut through an EV's thickened chassis and door pillars in order to rescue trapped occupants. Emergency personnel must also be able to identify high voltage power cables in the transmission and power systems of the extended range electric car. Furthermore, they must know the locations and safe removal of mechanical battery disconnect service switches designed to split the battery pack up in such a way that electrical shock risks are eliminated.

To provide the needed EVs training, the National Fire Protection Association (NFPA) launched the U.S. Emergency Responder Safety Training for Advanced Electric Drive Vehicles, which will develop and implement an emergency response training program focused on advanced electric vehicles. As discussed in the NFPA Journal, the association anticipates completing many first responder training courses for the project over the next year to keep responders and the public safe with the new technology.

More information about this initiative can be seen in the NFPA News Release announcing a National Safety Summit on the safe implementation of electric vehicles.

The U.S. Fire Administration offers the following tips when dealing with crashes involving these vehicles:

- Always assume the vehicle is powered-up despite no engine noises.
- Put vehicle in park, turn ignition off, and remove key to disable the high-voltage system.
- Consider the electrical system unsafe for a full five minutes after ignition shutdown.
- Never touch, cut, or open any orange cable or components protected by orange shields.
- Remain a safe distance from vehicle if it is on fire.

2010 Fire/EMS Safety, Health, and Survival Week

In cooperation with the International Association of Fire Chiefs (IAFC), the Emergency Management and Response—Information Sharing and Analysis Center (EMR-ISAC) announces the 2010 Fire/EMS Safety, Health, and Survival Week, which takes place 20 to 26 June. Safety, Health, and Survival Week is a collaborative program sponsored by IAFC and the International Association of Fire Fighters (IAFF) in partnership with more than 20 national fire service organizations.

As stated in IAFC literature, the theme for this year's event is "Fit for Duty," because "more than 50 percent of firefighter line-of-duty deaths are caused by health and fitness-related issues."

According to IAFC, fire/EMS departments are encouraged to suspend all non-emergency activity during the week and instead focus entirely on safety, health, and wellness-related training and education until all shifts and personnel have participated. "An entire week is provided to ensure each shift and duty crew can spend one day focusing on these critical issues."

The EMR-ISAC noted that IAFC also provides a web site containing useful general planning resources, promotion and media resources, and local planning examples. More information is available from the National Institute for Occupational Safety and Health.

REPORTING NOTICE

The National Infrastructure Coordinating Center (NICC) within the Department of Homeland Security (DHS) Office of Infrastructure Protection is the central point for notifications regarding infrastructure threats, disruptions, intrusions, and suspicious activities. Emergency Services Sector personnel are requested to report any incidents or attacks involving their infrastructures using at least the first and second points of contact seen below:

1) NICC - Voice: 202-282-9201, Fax: 703-487-3570, E-Mail: nicc@dhs.gov
2) Your local FBI office - Web: www.fbi.gov/contact/fo/fo.htm
3) EMR-ISAC - Voice: 301-447-1325, E-Mail: *emr-isac@dhs.gov*, fax: 301-447- 1034, Web: www.usfa.dhs.gov/emr-isac, Mail: E-108, 16825 South Seton Avenue, Emmitsburg, MD 21727